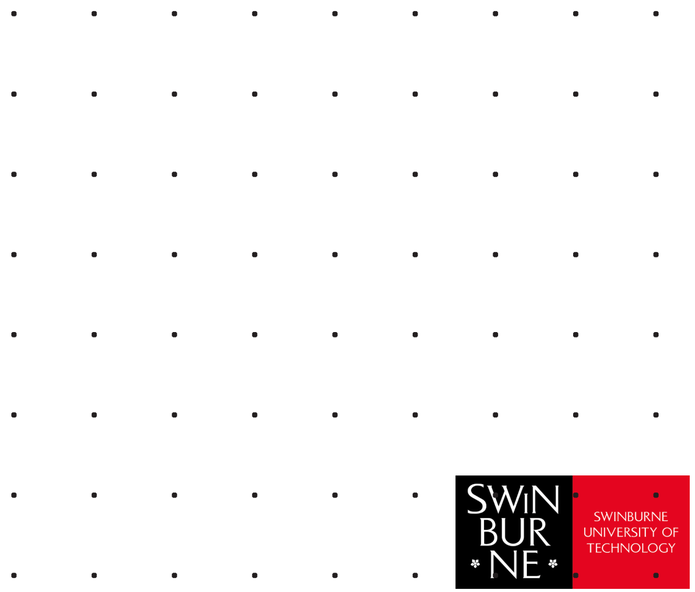
SWINBURNE UNIVERSITY OF TECHNOLOGY

COS20007
Object-Oriented Programming

Topic 01 Part B
Features of OO Language



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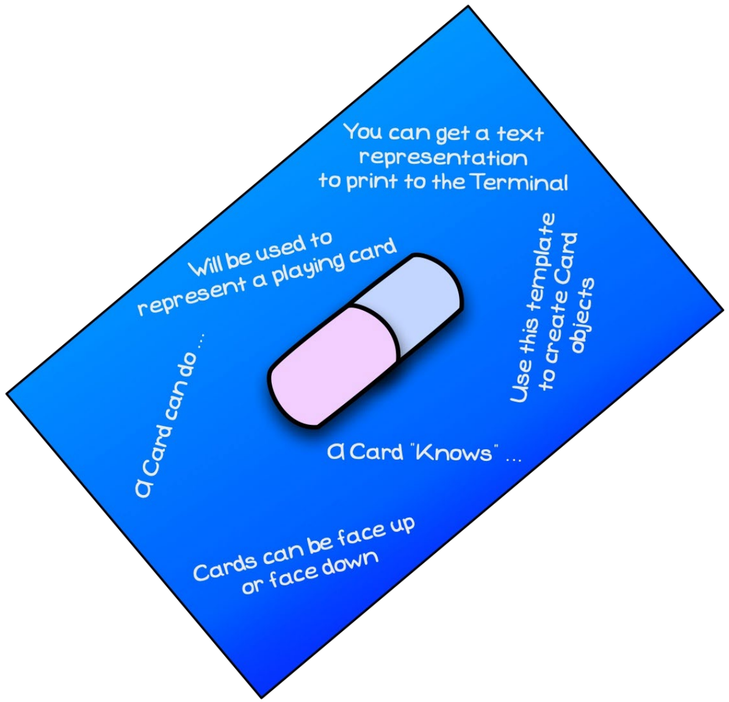
Learning Outcomes

- Understand key concepts of Class definition in OOPs
  - Class
  - Field
  - Method
  - Properties
  - Constructors

Implement your designs using an object oriented programming language

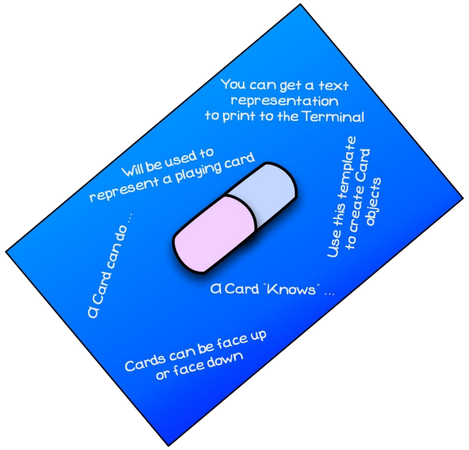
Define classes to capture object specifications

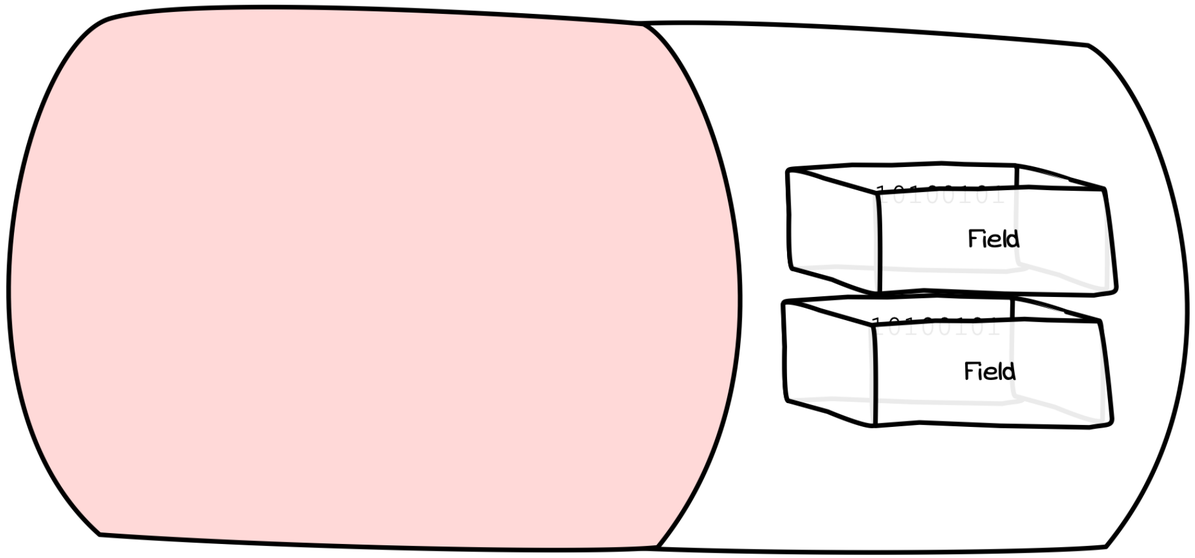


captured in

class

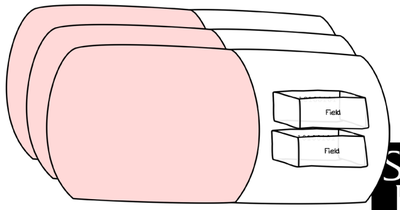
Add private fields to the class to store the things the object knows



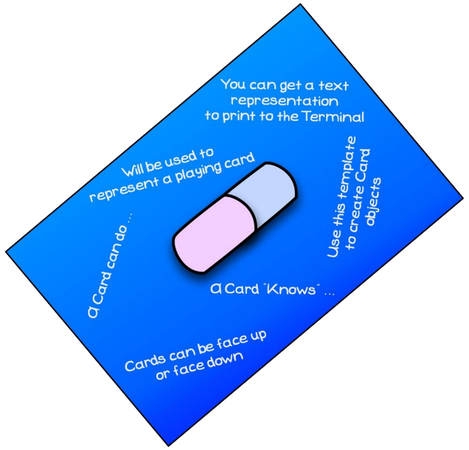


Field are declared within the class

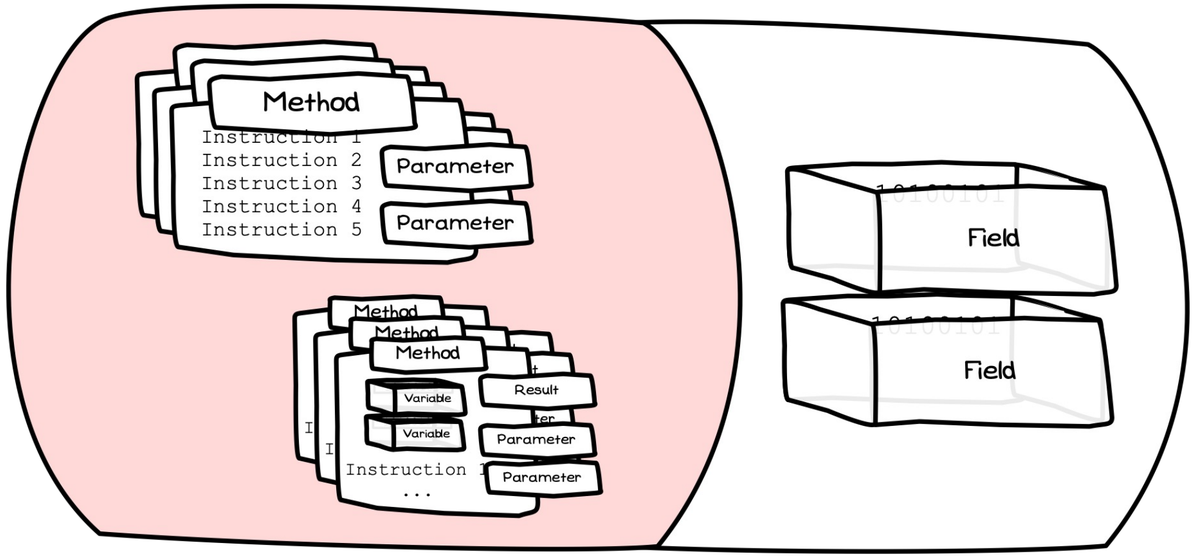
The field exists within each object



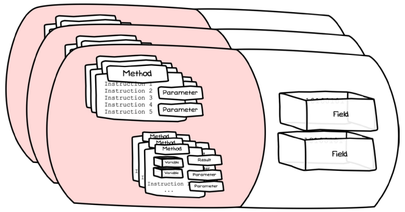
Add methods to the class to code the things the object can do



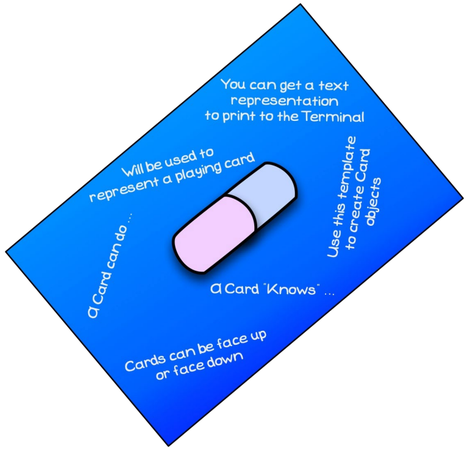
Methods are declared within the class



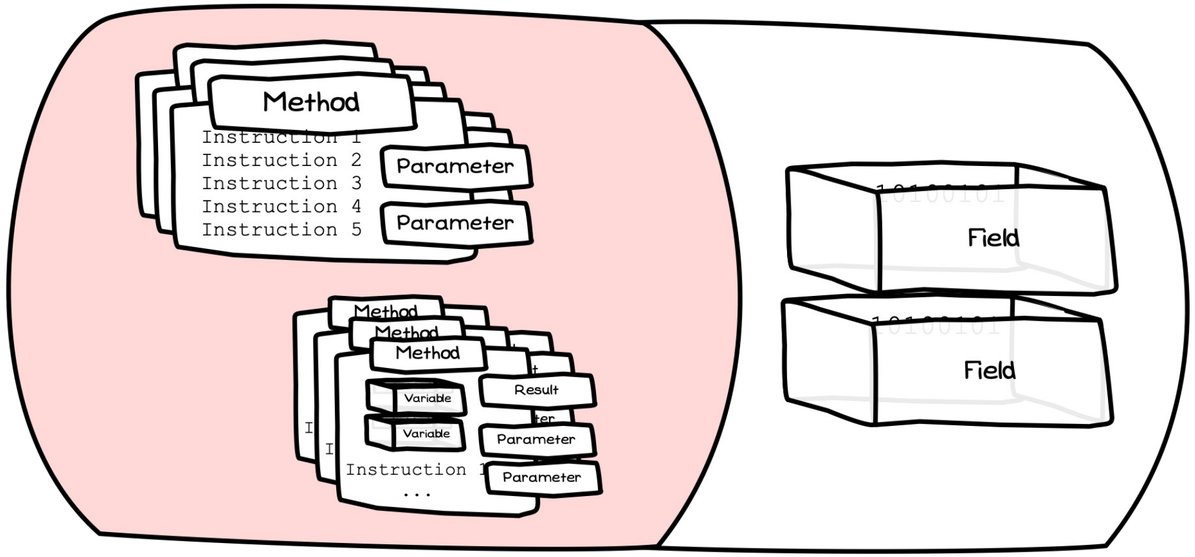
The methods exist for each object



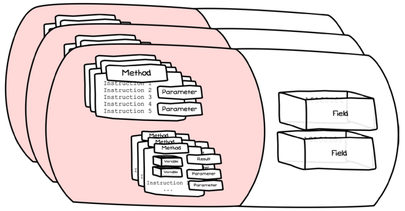
Add properties to the class to give access to hidden data



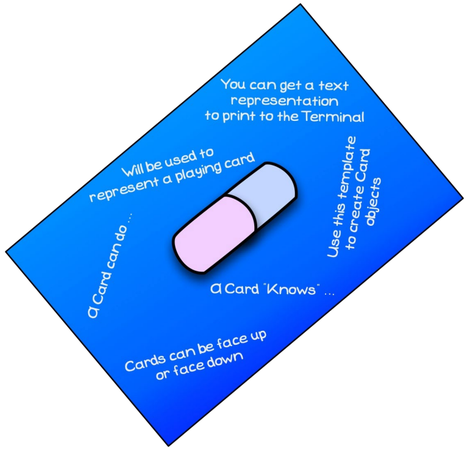
Properties are get and set methods declared within the class



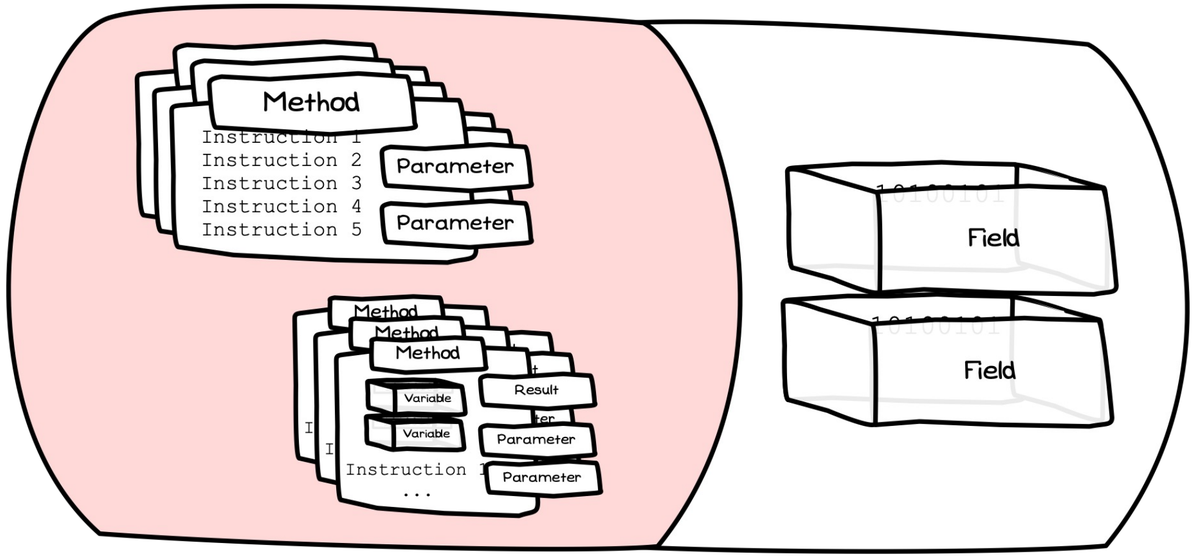
The properties exist for each object



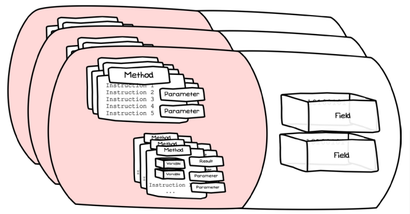
Add special methods called constructors to initialise your objects when created



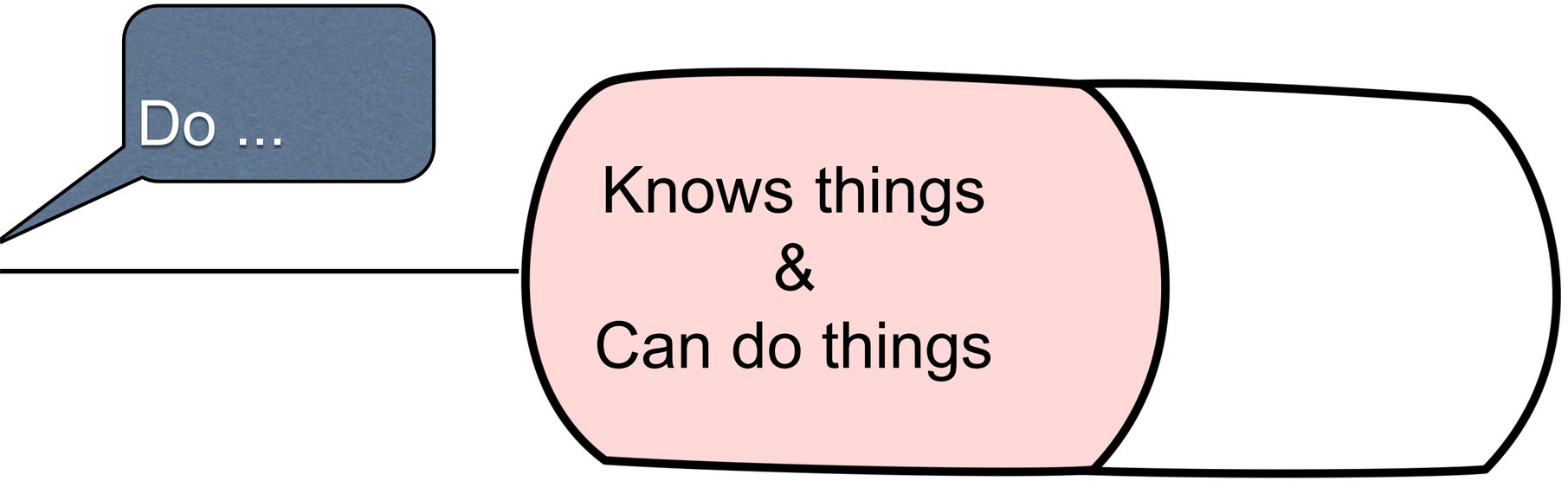
Constructors are declared within the class



These define how to create/initialise the objects.

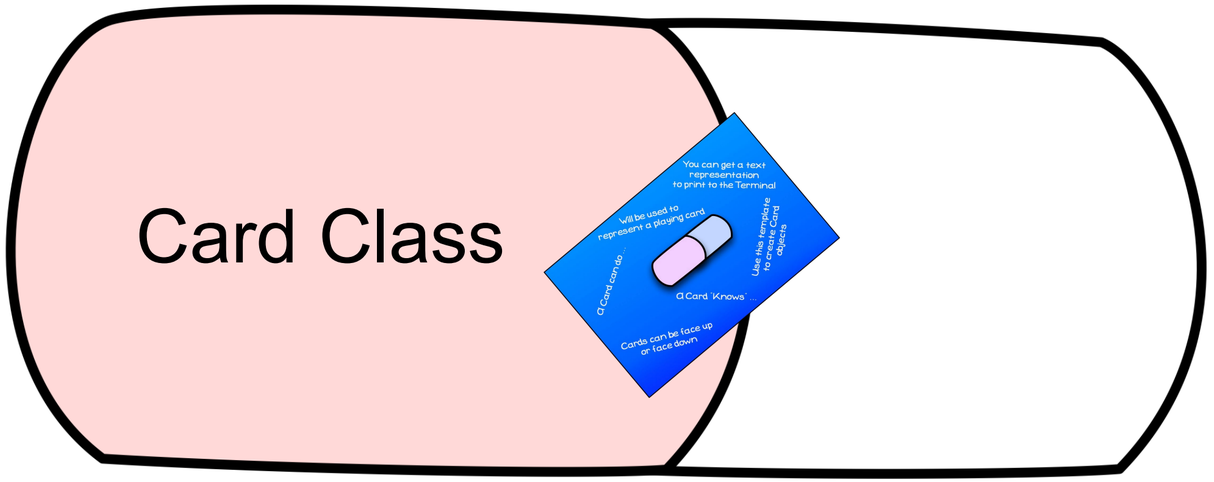


In your program create objects, and get them to do things...



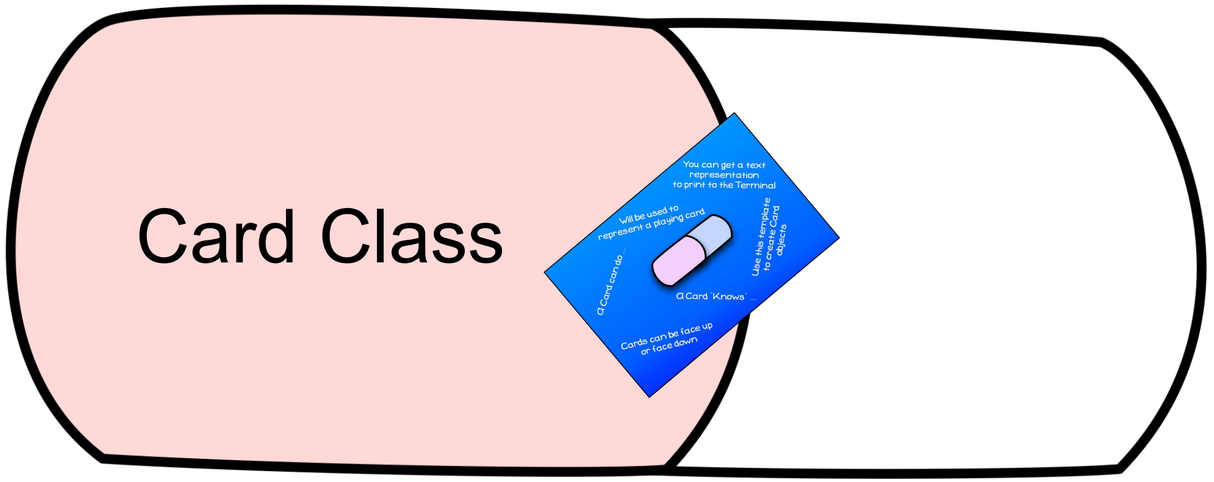
Uses what it knows to achieve the requested task

At runtime classes also become objects that provide services



Can create objects...

You can add features to class objects in your code



Can create objects...
You can add more...

Object orientation offers new means of managing complexity

Objects combine data and functionality, creating larger more meaningful abstractions

Take away message

- Define Classes to capture object specifications in your software
- Define a class in each programming file
- Define a class including constructors, fields, methods, and properties
- We can define multiple objects can be initiated from a predefined class

Get started creating object oriented programs